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SIR WALTER SCOTT AND HIS DOGS.
ONE of my pleasant recollections is that of seeing Sir Walter Scott out on a stroll with his dogs ; the scene being in the neighbourhood of Abbotsford, in the summer of 1824, while as yet the gloom of misfortune had not clouded the mind of the great man. There he was limping gaily along with his pet companions amidst the rural scenes which he had toiled to secure and loved so dearly.

Scott's fondness for animals has perhaps never been sufficiently acknowledged. It was with him a kind of second nature, and appears to have been implanted when as a child he was sent on a visit to the house of his grandfather, Robert Scott, at Sandyknowe, in the neighbourhood of Dryburgh. Here, amidst flocks of sheep and lambs, talked to and fondled by shepherds and ewe-milkers, and revelling with collies, he was impressed with a degree of affectionate feeling for animals which lasted through life. At a subsequent visit to Sandyknowe, when his grandfather had passed away, and the farm operations were administered by 'Uncle Thomas,' he was provided with a Shetland pony to ride upon. The pony was little larger than many a Newfoundland dog. It walked freely into the house, and was regularly fed from the boy's hand. He soon learned to ride the little pony well, and often alarmed 'Aunt Jenny' by cantering over the rough places in the neighbourhood. Such were the beginnings of Scott's intercourse with animals. Growing up, there was something extraordinary in his attachment to his dogs, his horses, his ponies, and his cats ; all of which were treated by him, each in its own sphere, as agreeable companions, and which were attached to him in return. There may have been something feudal and poetic in this kindly association with humble adherents, but there was also much of simple good-heartedness. Scott added not a little to the happiness of his existence by this genial intercourse with his domestic pets. From Lockhart's Memoirs of Sir Walter, and other works, we have occasionally bright glimpses of

the great man's familiarity with his four-footed favourites. We can see that Scott did not, as is too often the case, treat them capriciously, as creatures to be made of at one time, and spoken to harshly when not in the vein for amusement. On the contrary, they were elevated to the position of friends. They possessed rights to be respected, feelings which it would be scandalous to outrage. At all times he had a soothing word, and a kind pat, for every one of them. And that, surely, is the proper way to behave towards the beings who are dependent on us.

Among Sir Walter's favourite dogs we first hear of Camp, a large bull-terrier, that was taken with him when visiting the Ellises for a week at Sunninghill in 1803. Mr and Mrs Ellis having cordially sympathised in his fondness for this animal, Scott, at parting, promised to send one of Camp's progeny in the course of the season to Sunninghill. As an officer in a troop of yeomanry cavalry, Scott proved a good horseman, and we are led to know that he was much attached to the animal which he rode. In a letter to a friend written at this period (1803), he says : 'I have, too, a hereditary attachment to the animal—not, I flatter myself, of the common jockey cast, but because I regard him as the kindest and most generous of the subordinate animals. I hardly ever except the dogs ; at least, they are usually so much better treated, that compassion for the steer should be thrown into the scale when we weigh their comparative merits.'

For several years Camp was the constant parlour dog. He was handsome, intelligent, and fierce, but gentle as a lamb among the children. At the same time, there were two greyhounds, Douglas and Percy, which were kept in the country for coursing. Scott kept one window of his study open, whatever might be the state of the weather, that Douglas and Percy might leap out and in as the fancy moved them. He always talked to Camp as if he understood what was said—and the animal certainly did understand not a little of it ; in particular, it seemed as if he perfectly comprehended on all occasions that his master considered him a

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sensible and steady friend ; the greyhounds, as volatile young creatures whose freaks must be borne with.

William Laidlaw, the friend and amanuensis of Scott, mentions in the *Abbotsford Notanda* a remarkable instance of Camp's fidelity and attention. It was on the occasion of a party visiting a wild cataract in Dumfriesshire, known as the Gray Mare's Tail. There was a rocky chasm to be ascended, up which Scott made his way with difficulty, on account of his lameness. 'Camp attended anxiously on his master ; and when the latter came to a difficult part of the rock, Camp would jump down, look up to his master's face, then spring up, lick his master's hand and cheek, jump down again, and look upwards, as if to shew him the way and encourage him. We were greatly interested with the scene.'

The most charming part of Scott's life was, as we think, that which he spent with his family at Ashiestiel, from about 1804 to 1808, part of which time he was engaged in writing *Marmion*. Ashiestiel was a country mansion situated on the south bank of the Tweed, half way between Innerleithen and Galashiels, and in what would be called a solitary mountain district. There was the river for fishing, and the hills for coursing, and no other amusement. To enliven the scene, literary friends came on short visits. There was an odd character in the immediate neighbourhood, called from his parsimony Old Nippie, whose habits afforded some fun. When still at Ashiestiel in 1808, there is presented a pleasant picture by Lockhart of the way in which Scott passed the Sunday. The account of it is a perfect Idyll. 'On Sunday he never rode—at least not until his growing infirmity made his pony almost necessary for him—for it was his principle that all domestic animals have a full right to their Sabbath of rest ; but after he had read the Church service, he usually walked with his whole family, dogs included, to some favourite spot at a considerable distance from the house—most frequently the ruined tower of Elibank—and there dined with them in the open air on a basket of cold provisions, mixing his wine with the water of the brook beside which they were all grouped around him on the turf ; and here, or at home, if the weather kept them from their ramble, his Sunday talk was just such a series of biblical lessons as that preserved for the permanent use of the rising generation in his *Tales of a Grandfather*. He had his Bible, the Old Testament especially, by heart ; and on these days inwove the simple pathos or sublime enthusiasm of Scripture, in whatever story he was telling, with the same picturesque richness as he did, in his week-day tales, the quaint Scotch of Pitscottie, or some rude romantic old rhyme from Barbour's *Bruce* or Blind Harry's *Wallace*'.

Failing from old age, Camp was taken by the family to Edinburgh, and there he died about January 1809. He was buried in a fine moonlight night in the little garden behind the house, No. 39 Castle Street, immediately opposite the window where Scott usually sat writing. His daughter, Mrs Lockhart, remembered 'the whole family standing round the grave as her father himself smoothed down the turf above Camp with the saddest expression of face she had ever seen in him. He had been engaged to dine abroad that day, but apologised on account of "the death of a dear old friend."'

A few months later, Scott says in one of his letters : 'I have supplied the vacancy occasioned by the death of dear old Camp with a terrier puppy of the old shaggy Celtic breed,' and which he named Wallace. This new companion was taken on an excursion to the Hebrides in 1810, and in time partly compensated for the loss of Camp. There came, however, a fresh bereavement in 1812, in the death of the greyhound Percy. Scott alludes to the fact in one of his letters, 'We are going on in the old way, only poor Percy is dead. I intend to have an old stone set up by his grave, with *Oy gist li preux Percie* [Here lies the brave Percy] ; and I hope future antiquaries will debate which hero of the House of Northumberland has left his bones in Teviotdale.' The two favourite greyhounds are alluded to in the Introduction to the second canto of *Marmion*—

Remember'st thou my greyhounds true ?
O'er holt or hill there never flew,
From slip or leash there never sprang,
More fleet of foot or sure of fang.

In a letter dated Abbotsford, 1816, written to Terry, with whom he communicated on literary and dramatic subjects, he says : 'I have got from my friend Glengarry the noblest dog ever seen on the Border since Johnnie Armstrong's time. He is between the wolf and deer hound, about six feet long from the tip of the nose to the tail, and high and strong in proportion : he is quite gentle and a great favourite. Tell Will. Erskine he will eat off his plate without being at the trouble to put a paw on the table or chair. I shewed him to Matthews, who dined one day in Castle Street before I came here.'

The staghound so introduced was the famous Maida, which came upon the scene when the Waverley novels were beginning to set the world on fire. Maida was the crack dog of Scott's life, and figures at his feet in the well-known sculpture by Steell. He did not quite supersede Wallace and the other dogs, but assumed among them the most distinguished place, and might be called the canine major-domo of the establishment. On visiting Abbotsford in 1817, Washington Irving enjoyed the pleasure of a ramble with Scott and his dogs. His description of the scene is so amusing that we can scarcely abate a jot :

'As we sallied forth, every dog in the establishment turned out to attend us. There was the old staghound, Maida, that I have already mentioned, a noble animal ; and Hamlet, the black greyhound, a wild thoughtless youngster, not yet arrived at the years of discretion ; and Finette, a beautiful setter, with soft silken hair, long pendent ears, and a mild eye, the parlour favourite. When in front of the house, we were joined by a superannuated greyhound, who came from the kitchen wagging his tail ; and was cheered by Scott as an old friend and comrade. In our walks, he would frequently pause in conversation, to notice his dogs, and speak to them as if rational companions ; and, indeed, there appears to be a vast deal of rationality in these faithful attendants on man, derived from their close intimacy with him. Maida deport'd himself with a gravity becoming his age and size, and seemed to consider himself called upon to preserve a great degree of dignity and decorum in our society. As he jogged along a little distance ahead of us, the young dogs would

gambol about him, leap on his neck, worry at his ears, and endeavour to tease him into a gambol. The old dog would keep on for a long time with imperturbable solemnity, now and then seeming to rebuke the wantonness of his young companions. At length he would make a sudden turn, seize one of them, and tumble him in the dust, then giving a glance at us, as much as to say: "You see, gentlemen, I can't help giving way to this nonsense," would resume his gravity, and jog on as before. Scott amused himself with these peculiarities. "I make no doubt," said he, "when Maida is alone with these young dogs, he throws gravity aside, and plays the boy as much as any of them; but he is ashamed to do so in our company, and seems to say: Ha' done with your nonsense, youngsters: what will the laird and that other gentleman think of me if I give way to such foolery?"

Scott amused himself with the peculiarities of another of his dogs, a little shame-faced terrier, with large glassy eyes, one of the most sensitive little bodies to insult and indignity in the world. "If ever he whipped him," he said, "the little fellow would sneak off and hide himself from the light of day in a lumber garret, from whence there was no drawing him forth but by the sound of the chopping-knife, as if chopping up his victuals, when he would steal forth with humiliated and downcast look, but would skulk away again if any one regarded him."

"While we were discussing the humours and peculiarities of our canine companions, some object provoked their spleen, and produced a sharp and pelulant barking from the smaller fry; but it was some time before Maida was sufficiently roused to ramp forward two or three bounds, and join the chorus with a deep-mouthed *bow wow*. It was but a transient outbreak, and he returned instantly, wagging his tail, and looking up dubiously in his master's face, uncertain whether he would receive censure or applause. "Ay, ay, old boy!" cried Scott, "you have done wonders; you have shaken the Eildon hills with your roaring; you may now lay by your artillery for the rest of the day. Maida," continued he, "is like the great gun at Constantinople; it takes so long to get it ready, that the smaller guns can fire off a dozen times first."

Maida accompanied his master to town, where he occupied the place of the lamented Camp. In the sanctum at Castle Street, Maida lay on the hearthrug, ready when called on to lay his head across his master's knees, and to be caressed and fondled. On the top step of a ladder for reaching down the books from the higher shelves sat a sleek and venerable Tom-cat, which Scott facetiously called by the German name Hinse of Hinsfeldt. Lockhart mentions that Hinse, 'no longer very locomotive, usually lay watching the proceedings of his master and Maida with an air of dignified equanimity. When Maida chose to leave the party, he signified his inclinations by beating the door with his huge paw; Scott rose and opened it for him with courteous alacrity—and then Hinse came down purring from his perch, and mounted guard by the foot-stool, *vice* Maida absent on furlough. Whatever discourse might be passing was broken, every now and then, by some affectionate apostrophe to these four-footed friends. Dogs and cats, like children, have some infallible tact for discovering who is, and who is not, really

fond of their company; and I venture to say, Scott was never five minutes in any room before the little pets of the family, whether dumb or lisping, had found out his kindness for all their generation.'

In letters to his eldest son, Scott seldom fails to tell him how things are going on with the domesticated animals. For example: 'Hamlet had an inflammatory attack, and I began to think he was going mad, after the example of his great namesake; but Willie Laidlaw bled him, and he recovered. Pussy is very well.' Next letter: 'Dogs all well—cat sick—supposed with eating birds in their feathers.' Shortly afterwards: 'All here send love. Dogs and cat are well. I dare say you have heard from some other correspondent that poor Lady Wallace [a favourite pony] died of an inflammation after two days' illness. Trout [a favourite pointer] has returned here several times, poor fellow, and seems to look for you; but Henry Scott is very kind to him.' In a succeeding letter we have the account of an accident to Maida: 'On Sunday, Maida walked with us, and in jumping the palings at the Greentongue park, contrived to hang himself up by the hind-leg. He howled at first, but seeing us making towards him, he stopped crying, and waved his tail, by way of signal, it was supposed, for assistance. He sustained no material injury, though his leg was strangely twisted into the bars, and he was nearly hanging by it. He shewed great gratitude, in his way, to his deliverers.'

At Abbotsford, in the autumn of 1820, when a large party, including Sir Humphry Davy, Dr Wolaston, and Henry Mackenzie were sallying out—Scott on his pony Sybil Grey, with Maida gambolling about him—there was some commotion and laughter when it was discovered that a little black pig was frisking about and apparently resolved to be one of the party for the day. Scott tried to look stern, and cracked his whip at the creature, but was in a moment obliged to join in the general cheers. Poor piggy was sent home. 'This pig,' says Lockhart, 'had taken, nobody could tell how, a most sentimental attachment to Scott, and was constantly urging his pretensions to be admitted a regular member of his *tail* along with the greyhounds and terriers; but indeed, I remember him suffering another summer under the same sort of pertinacity on the part of an affectionate hen. I leave the explanation for philosophers—but such were the facts.'

Mr Adolphus, a visitor to Abbotsford in 1830, when the health of the great writer was breaking down under his honourable and terribly imposed task-work, gives us not the least striking instance of Scott's wonderful considerateness towards animals. 'In the morning's drive we crossed several fords, and after the rain they were wide and deep. A little, long, wise-looking, rough terrier, named Spice, which ran after us, had a cough, and as often as we came to a water, Spice, by the special order of his master, was let into the carriage till we had crossed. His tenderness to his brute dependants was a striking point in the benignity of his character. He seemed to consult not only their bodily welfare, but their feelings, in the human sense. He was a gentleman even to his dogs.' When too roughly frolicsome, he rebuked them gently, so as not to mortify them, or spoil the natural buoyancy of their character.

We could extend these memorabilia, but have perhaps said enough. Maida died in October 1824, and is commemorated in a sculptured figure at the doorway of Abbotsford. His attached master wrote an epitaph on him in Latin, which he thus Englished :

Beneath the sculptured form which late you wore,
Sleep soundly, Maida, at your master's door.

It was a sad pang for Scott, when quitting home to seek for health abroad, and which he did not find, to leave the pet dogs which survived Maida. His last orders were that they should be taken care of. We may be permitted to join in the noble eulogium pronounced on Scott by Willie Laidlaw, who lived to mourn his loss, that Kindness of heart was positively the reigning quality of Sir Walter's character !

W. C.

THE LAST OF THE HADDONS.

CHAPTER XXI.—OUR EXPERIMENT.

I WATCHED Lilian very anxiously for a few days after our visit to Fairview. But although it had given her a shock to find Arthur Trafford already upon such familiar terms there, whilst there had been no call at the cottage, nor even a message sent to inquire after our well-being, she was not permanently depressed in consequence. I must do Arthur Trafford the justice to say that I think he was ashamed of sending conventional messages under the circumstances, and felt that bad as silence was, it was in better taste than meaningless words. Nevertheless, his sister might have contrived a call, had she possessed the something besides blue blood, which, in dear Mrs Tipper's estimation, constitutes a gentlewoman, sufficiently to recollect past kindness, and act up to her former rôle of being Lilian's friend. Fortunately, Lilian did not depend upon her friendship.

'Do not fear for me, Mary,' she whispered, rightly interpreting my anxious looks.

I did not fear for her—in the long-run. I knew that in time she would come to be even ashamed of having given the name of love to her infatuation for Arthur Trafford. But to attain that end, she must not be allowed to dream over the past ; and I was casting about in my mind in the hope of finding some plan for employing our time which would be sufficiently interesting to absorb the attention of her mind as well as her hands. Pupils Mrs Tipper would not hear of ; nor would she allow us to render any assistance in the house-keeping, insisting that Becky and she had no more to do than they could very easily get through. Indeed Becky worked with a will ; Mrs Tipper and she were the best of friends ; and nothing would have pleased them better than keeping Lilian and me in the parlour in state, and waiting upon us.

Fortunately we neither of us inclined for that kind of state. Lilian knew as well as I did that hers was not a nature to be nursed and petted out of a trouble. As people thoroughly in earnest generally do, we soon found a way of filling up our time—a way which had a spice of novelty and adventure in it, specially adapted to our present frame of mind.

About a mile distant, on the high-road leading

from the left of the village towards the town of Grayleigh, were a few cottages, which had been erected for the accommodation of the labourers upon some fruit and hop growing grounds in the vicinity. Lilian and I had come upon them in one of our walks ; and their forlorn uncared-for aspect appealed to our sympathies, and set us thinking about the possibility of a remedy. At length an idea suggested itself to us. During the daytime, at this season of the year, they were all unoccupied but one, where dwelt an old woman past work, and who was, as she proudly informed us, kept out of the workhouse by her children. Through the medium of this old woman, we applied for permission to do what we could for the absent wives and mothers, in the way of making the desolate-looking hovels more like homes. There seemed some difficulty in obtaining leave. We afterwards found that there had been grave deliberations as to the expediency of allowing us the freedom of the place, there being all sorts of doubts and speculations as to our motives. But after two or three visits to old Sally Dent, during which she sharply questioned and cross-questioned us, she gave us to understand that it was agreed that we might try what we could do ; though I believe permission was given more out of curiosity to see what our intention was, than from anything else ; and she was cautious enough to inform us that they reserved to themselves the right of putting a summary stop to our visits whenever it should please them so to do. For the present, Sally Dent gave us the key of the end cottage, which was to be duly returned when what she ungraciously termed our 'rummaging' was over.

'Not as you will find much to rummage at Meg Lane's,' chuckled the old woman. 'She ain't taken any pride in her home since she had to sell her bits of things when they were down with the fever.'

It did appear rather unwarrantable to unlock the door and enter the place in the absence of the inmates, before we had even made their acquaintance ; but we satisfied ourselves with the hope that the end would be found to justify the means ; and the very first day we contrived to leave a pleasant indication of our intentions.

The cottage contained two rooms up-stairs, and one on the ground floor opening to the road, with a little back scullery. We did not intrude into the upper regions, contenting ourselves with putting things into some sort of order in the little sitting-room. Perhaps I had better not describe how very real our work was, and how hopeless at first seemed the task we had undertaken. But we worked with a will, enjoying many a little jest at the idea of what Mrs Tipper's astonishment would be if she could see us with our sleeves tucked up sweeping out dirty corners, when we were supposed to be taking our daily constitutional as decorous gentlewomen should. Lilian devoted herself to one dirty cupboard with a pertinacity which, I gravely informed her, did equal honour to her head and heart, considering the time it would take to make any visible improvement. Four shelves filled with a heterogeneous collection of unwashed cups and saucers, bread new and stale, scraps of meat (some not too fresh), a jug coated with a thick fur of sour milk, dirty plates, mugs smelling of stale beer, bits of old pipes, and so forth—all

canopied o'er' with spiders' webs, certainly were an undertaking.

But it must not be supposed that we intended solely to employ ourselves in sweeping and cleaning: no indeed; the little we did in that way was only intended to serve as a suggestion for others to carry out. Our ambition was to induce the people to begin to feel that they had homes, and so in time to take some little pride in keeping them neat themselves.

The small amount of money which we allowed ourselves to spend was spent in a way which might not a little surprise some people. We tried to make the little room attractive, with an ornament or two, which though inexpensive, were in good taste and pretty in shape and colouring—a primitive hanging shelf with two or three neatly bound books, a clean blind, a nicely framed print for the wall, and so forth, all new and fresh and bright; a contrast with the blackened ceiling, which we hoped would in time suggest whitewash. Then we boldly challenged our hosts, as we laughingly termed them, with a clean hearth; and after persisting two or three days, we were delighted to find that the hint was taken—that our clean hearth-stone had brought about a decently brushed grate.

By this time we were presented with the key of the next cottage, together with a pressing invitation to extend the field of our operations. As days went on we began to feel a little proud of our success, such as it was, though it could not be said to have been achieved without difficulty. In the outset, all sorts of obstacles were placed in our way. It took us, for instance, some days to bring a certain dirty table to reason. After cleaning away sundry marks, such as beer-stains, which offended our sense of propriety, we invariably found it as dirty as ever. A more unmanageable piece of business than this obstinate old table is not often found. It really was depressing, as Lilian said, to find our efforts so entirely ignored, not to say set at naught; though of course we did not intend to yield. We tried the effect of placing a little round waiter on the table, in the hope that its use would suggest itself; but without any good result. At length I began to perceive that this was a case in which we were contending against one of the lords of creation, and that for some reason he considered it necessary to assert his independence.

'It's old Jemmy Rodgers as lives with his darter,' explained Sally Dent, to whom I had put a question upon the point. 'He says you ain't a-doing all this for nothing—t ain't likely; and he ain't a-going to give in to the new ways till he knows for certain what's to come of it.'

'I should think he might be sure no harm could come of it.'

'He ain't so sure, Miss. *He* says' (carefully fixing the responsibility upon Jemmy Rodgers) 'that perhaps you only wants to make us all obligated to you, so as we can't shake you off when you comes by-and-by a-worritting about—'

'About what?' I asked, seeing that she hesitated to go on.

'Well, there; he says, most like you have got hold of some newfangled way for saving souls, and you wants to try it on we. William Marther, he says there's all sorts of new ways a-being tried up in London. But we are old-fashioned folks, and we've got enough to do to read our Bibles

and 'tend to what the clergyman says. He's a good kind gentleman; and if he worrits a bit about the drink and all that, we don't mind it from he, because he shews us the texts for what he says, and there's no saying nay to *them*.'

I very gravely assured her that I had no intention whatever of worritting; and that we did not, at anyrate for the present, even desire to make the acquaintance of the cottagers.

'But you must have *some* reason for doing it, Miss; at least Jemmy Rodgers ses so,' said Sally Dent, eyeing us sharply.

'Tell Jemmy Rodgers that if he attended more to what Mr. Wyatt teaches, he would not be so ready to doubt others,' I replied.

And leaving that to sink into Jemmy Rodgers' heart, we cleaned away at the table again. All to no purpose; that table represented Jemmy Rodgers' independence of us and our help, and we regularly found it in the same state every morning. But we made up our minds that even Jemmy Rodgers must have a weakness somewhere and after a few diplomatic questions to Sally Dent, we discovered it. Once his weakness discovered, Jemmy Rodgers was vanquished, though it cost us five shillings to do it, and he really did not deserve to have that much spent upon him. But by-and-by perhaps, he would understand that it was the victory only which had been paid for. A neat little bracket was placed beside the fireplace, and on it, Jemmy Rodgers one evening found a pretty stone tobacco-jar filled with good tobacco, and a nice new pipe. Not a little curiously did we open the door the next morning. There was only one mark on the table, and that a very faint one, as a sort of feeble protest that Jemmy Rodgers was not to be bought; but after that we were left to our own devices; regarded, I think, as eccentric, but eccentric in a way that no one had any right to object to—something like children who had a fancy for playing at being servants.

Be that as it may, we were beginning to be rewarded in the way we most cared for. There were unmistakable signs of a disposition to keep the little homes in a more orderly state; and the delight our modest offerings in the way of ornament gave, was very marked as well as suggestive.

The love which the poor display for some little possession in the way of ornament, is not always, I think, sufficiently considered. I can only say that I have known one little thing of beauty, or even a faint and blurred image of beauty, to have a more refining influence in a cottage home than many would suspect. Wherever a cherished bit of china or what not is found, there will be also found some tendency towards making the surroundings more worthy of it.

I found that our proceedings not a little puzzled Mr. Wyatt; an earnest, anxious, good man, well known as a friend to the poor in all directions. He too for a time was under the impression that we might possibly be paving the way to introduce doctrinal matters, and felt it, I think, to be his duty to ascertain what these were. It was, I knew, not by chance he one morning made his appearance at the door of a cottage we happened to be at work in. I was busily engaged hammering in a nail for a picture, and did not turn my head when the sunlight streamed in through the open doorway, imagining that Lilian had

re-entered, she having gone to borrow a broom from the next house.

'A more wrong-headed nail than this never existed! We must not forget nails the next time we go to Grayleigh, Lilian.'

'I beg your pardon.'

I turned hastily round and met the eyes of Mr Wyatt. Descending from the chair, as gracefully as might be, with due regard to its ricketiness, I offered my hand.

'How do you do, Mr Wyatt? We are not quite strangers, I think?'

'No, indeed,' he replied, looking not a little relieved. Though in the interests of his poor, he had made up his mind to find out who and what we were, he was too much a gentleman to enjoy doing it. I knew afterwards that he had feared having to do battle with some lady with objectionable views and an objectionable way of advocating them; and it was therefore natural enough he should be a great deal relieved to see one of the members of his small congregation. As I have said elsewhere, Lilian and I had, in the prosperous days, preferred attending the primitive little church on the road to Grayleigh, to going to the newly built and more highly decorated church on the hill. And as the congregation consisted mostly of labouring people and the small shopkeepers in the village, it was natural that the appearance of two strangers should attract some attention, which had led to his introducing himself, and a pleasant acquaintance springing up between us.

It was this little church which the inmates of the 'Home,' as it was gracefully designated, attended; sitting in the organ-loft, where they were out of range of curious eyes; a consideration for which I afterwards found they were indebted to Mr Wyatt. We had frequently passed them on their road to church; and I had been painfully struck by the hopeless, not to say sullen and discontented aspect of most of the women, as they filed slowly along, the matron's rich silks and velvets in too marked a contrast to the ugliness of her charge's attire, which I thought savoured unnecessarily of prison uniform for those who were supposed to be struggling to free themselves from past associations.

Then I was disappointed that my occasional smile and word, as we stood aside for them to pass into the porch, should be considered an offence by the matron, as it so evidently was. And I could not see why I should not offer a few violets I was carrying, which the eyes of one of the women seemed to ask for as we passed them one morning in the road.

'I am to give 'em back, Miss,' she exclaimed, running after me and putting them into my hand. 'It's against rules, please—that is, the mistress says I mustn't have them.'

'Well, I cannot present you with the beautiful sky, and that lark's song, and the glorious sunshine, for they are yours already; but please take my good-wishes and give me yours.'

She stood gazing at me a moment, then turned away without a word, and ran back.

'This,' continued Mr Wyatt, 'is a surprise, Miss Haddon. I did not at all expect to find you to be one of the mysterious ladies I have of late heard so much about from the cottagers here. Is Miss—'

'Yes; Miss Maitland is the other delinquent,'

I smilingly replied, as he hesitated over the name, and so shewed me that he knew something of what had occurred. At this moment Lilian came in, her skirts and sleeves tucked up, a handkerchief tied corner-wise over her hair, and a broom in her hand.

'We really must contrive to squeeze a better broom than this out of next week's allowance, Mary; it won't go into the corners a bit.' (We had agreed to restrict ourselves to spending only so much a week upon our protégées, leaving the rest to our own ingenuity.) 'We cannot make brooms, you know; and oh—'

'Mr Wyatt, Lilian.'

He gave her a low bow in return for hers, and I fancied that I understood why he was a trifle more embarrassed with her than with me. Lilian had never looked more lovely than she did thus, her refined order of beauty idealising her working dress. The clear, deep-blue eyes, hair of *unpurchaseable* gold, the soft rosy cheeks, and white delicately rounded arms bared to the elbow, what a charming picture it was! I do not think I would even have dispensed with the little stray black, which had perched itself at the edge of a dimple, much more effectively than anything in the way of a patch could do it. One might have imagined her the beautiful Princess who went as serving-maid in the Ogre's castle, protected only by her goodness and innocence—all-sufficient protectors in fairy tales, and more than they are always allowed to be in real life—to obtain the release of her captive father. She was so natural too, and devoid of all attempts to attract; and only sensitive as a pure good girl, with a delicate sense of truth and honour, is sensitive.

'You have heard what we are attempting here, Mr Wyatt?' I asked.

'Yes; 'slowly and awkwardly. 'But I am not altogether sure that I understand your plan.'

I gave him a little explanation of what our intentions were; and he listened gravely and politely, though I could see that I did not entirely succeed in proselytising him. He was ready enough to give us credit for good intentions; but when we were bold enough to ask his opinion as to our succeeding, he acknowledged that he had not much hope of our being able to do permanent good. And when Lilian a little triumphantly told him about our success with Jemmy Rodgers, he smilingly pointed out that that was a success which had been purchased. In truth he confessed that he belonged to the old school, and did not take kindly to innovations.

'I do not, for example, like seeing a lady doing such work as Miss Maitland is doing for people who have quite enough time to keep their own homes clean and neat, if they would only do so, instead of going down to spend their spare hours at the village ale-house.'

'But we are hoping to get them to do that, Mr Wyatt,' said Lilian. 'We are trying to make the homes more attractive than the ale-houses.'

'I can only hope you will succeed, Miss Mervyn.'

'Well, I call it a tiny bit of success to get Meg Lane, as they call her, to brighten her fire-grate and clean her window.'

'Purchased,' he replied, smilingly.

But I could see that he advanced his objections hesitatingly and doubtfully; and I felt that he would be ready enough to acknowledge that we

were right, whenever we could prove that we were ; and we did not despair of that in time. Moreover, he had now no fear of our attempting to disturb the faith of his flock.

We came off a great deal better with Mr Wyatt than with the district visitors at the cottages ; though even they recognised the wisdom of non-interference, and kept aloof, paying their weekly visits in the afternoons when we had retired. Nevertheless, we quite understood why we were always finding certain tracts of a very decided tendency placed in our way, had old Sally Dent not informed us that we were regarded as not being quite 'safe.' We just worked on, and did not intrude ourselves upon the residents at the cottages ; not even knowing them by sight, and making a *détour* on our way to church on Sundays, for the purpose of avoiding them.

CHAPTER XXII.—MORE WEAK THAN WICKED.

Robert Wentworth took good care that our time should not hang heavily upon our hands when we were at home, urging us to work, and keeping us well supplied with books, such as he had gradually got me into the habit of reading—books which required some little mental exercise for their proper appreciation. Moreover, he demanded notes, a paraphrase, or criticism, upon all we read ; being very exacting about our getting thoroughly to the root of the subject treated upon, and having no mercy upon what he termed a slovenly habit of thinking.

We were much amused at the tests he gave us, and the impossibility of throwing dust in his eyes. If Lilian wrote my thoughts upon a subject, and I hers, he detected which belonged to which with an unerring readiness which proved that our minds were as open books to him. The very difference in his treatment of us when he found us flagging, bantering—not to say taunting—me, and encouraging Lilian, I now think was a proof that he knew the kind of spur we each needed. And although I believed that he was doing all this for Lilian's sake, I was none the less grateful for the benefit it was to me. At his suggestion, Lilian was doing a little French with me, for which she gave me German ; whilst our sketch-books were not allowed to lie entirely unused. All this, with what dear Mrs Tipper called our long walks—she did not as yet know how our mornings were employed—sent us healthily tired each night to bed.

Robert Wentworth came down twice and sometimes three times during the week ; and after we had given him a *résumé* of the work we had done in the interval, we finished the evenings with music and singing. Lilian's voice was not her least charm. Then would come some triumph of dear Mrs Tipper's skill in the way of little appeasing dainties for our substantial tea, and afterwards Lilian and I went along the lanes with him as far as the stile, which separated them from the fields, in the summer moonlight, bidding him good-night there.

It was a pleasant life, though at the time I naturally could not think it *the* pleasantest ; it was merely the pleasant peaceful prelude—the, so to speak, preparation for the fuller life to come. But best of all, Lilian was beginning to enter into it with real enjoyment, less as a life lived from duty than from love.

'It is what I never hoped for—to see my darling get over it so well as this !' confided dear Mrs Tipper to me.

'They cannot at anyrate call her broken-hearted at present,' was my cheerful rejoinder.

'No, indeed, dear. I shall begin now to hope that by-and-by some one more worthy of her may have a chance ; and I shall yet live to see my Lilian's children about me.—And you too will be thinking of getting married presently, dear ?' with what I fancied was an inquiring glance.

I murmured something to the effect that perhaps my time would come ; even then shrinking a little nervously from entering into details.

'Of course it will, dear ; and Lilian's too. Already there is Mr Wyatt making all sorts of excuses for finding his way to the cottage. A nice gentleman ; isn't he, dear—shews what brings him so plain too ; doesn't he ?'

Yes, he did shew it plainly ; no doubt of that. If he did not already love Lilian, he was on the very verge of it. But that was not at all in accordance with my hopes.

'You forget Mr Wentworth,' I put in smilingly. She looked up into my face for a moment ; then bent over her knitting again, as I went on : 'I think you must have guessed what brings *him* so often down here, now ?'

'Yes, Mary ; yes, I have, dear.'

'And so have I ; but I suppose it's early days for talking of it yet.'

'Very well, dear ; you know best about that, of course. I will only say that Robert Wentworth is a great favourite of mine.'

'That is because he is so good, auntie,' said Lilian, who had caught the last words as she entered the room. 'He is the very best and kindest friend we have known.'

'The very best, dearie ?' I asked.

She flushed to her temples ; then, after a moment, repeated in a low clear tone : 'The very best and kindest, Mary.'

I was quite satisfied. No love-lorn damsel could talk in that way. Arthur Trafford no longer disturbed her peace. Everything was going on favourably for Robert Wentworth ; and the sooner poor Mr Wyatt was allowed to perceive the real state of the case, the better for his future peace.

Two months had glided thus pleasantly away. There was now only one shadow upon Lilian's mind, though that was an abiding one. The wrong done to the innocent mother was not likely to be forgotten by her child. It was that, and *not* the loss of her lover, which caused the soft yearning regretful expression that still lingered in the beautiful blue eyes.

Fortunately, we had accustomed ourselves to think of Arthur Trafford as Miss Farrar's lover, before the news reached us that it was so ; and I was very proud of Lilian's calm reception of it. After that, it was easy to get over the additional information that the marriage was arranged to take place very shortly.

Marian adopted the tone—I think I knew by whom it was suggested—of Arthur Trafford having been badly treated by Lilian, who had cruelly cast him off ; and that made matters easier for us all. As Marian said, Lilian could not blame her for accepting one whom she herself had rejected. Nor had she had any misgivings about his love. Fortunately for her own peace, she did not suspect

that Arthur Trafford's love for her was less than hers for him. And the readiness with which he had transferred his affections was interpreted in the same convenient way. 'The truth is, he had not seen *me* when he engaged himself to Lilian,' she confided to me in a little aside. 'You knew he admired me from the very first; now, didn't you, Miss Haddon? I don't blame you *now* for being cross about his paying me such compliments when he was engaged to Lilian; he really couldn't help it, poor fellow! And I do believe that if Lilian had played her cards well, he would have acted honourably to her; he says he should. But you can't blame me for being glad things have turned out as they have, neither. Caroline says only *envious* people would blame me.'

I really did not much blame her. I suppose she acted up to her perception in the matter; and I know she meant now to be good-natured. I will do her the justice to say she was honestly glad to find that Lilian shewed no sign of distress at the engagement.

'If you had been miserable or disagreeable about it, I don't know what I should have done, dear,' she said with engaging confidence. 'It would be like that story in the what's-its-name, you know, two sisters in love with the same man. Though I don't think—I'm *sure* I shouldn't have poisoned you. I expect I should have joined your hands, and then died of a broken heart,' sentimentally.

At which Lilian broke into a smile, and Marian was satisfied. In truth, no one could now have imagined Lilian a love-sick damsel, so improved was she in health and spirits by our present life.

Marian was very pressing with us to be present at the wedding, which was to be a very grand one, she told us.

'But I tell Caroline, I shan't care for it a bit if Lilian won't be first bridesmaid. And it shouldn't cost you a penny, dear,' she urged. 'Everything of the very best, and made at Madame Michaud, if you will only say you will come!'

But Lilian was firm; and then Marian tried the effect of her persuasive powers upon Mrs Tipper.

'You really must, aunt. It would look worse for you to stop away than even for Lilian—my own aunt!'

But Mrs Tipper also shewed that it was not to be thought of; and Marian at length came to the conclusion that their refusal arose from their sense of the wrong done to Lilian's mother; though she was quite as much at a loss to account for that as for everything else we did.

'I don't see why you should be so put out about a thing which can't be helped. When it was thought that it was *my* Ma who had been taken in, I behaved sensibly about it; and why can't Lilian and you do the same?'

Great preparations were being made for the event; and a great deal of company—'Caroline's' friends—was constantly at Fairview. Rumours reached us that the bridegroom expectant was not in very good health; indeed it was said that the marriage was being hastened on that account, a change of climate having been recommended for a while.

I saw him once only before his marriage, and that happened by chance. Had Lilian really suffered from his desertion of her—had I felt any desire to see her avenged—I must have been satisfied. As it was I felt almost inclined to

pity him, as more weak than wicked. I do not believe that any utterly bad man would be as heartily ashamed of himself as Arthur Trafford appeared to be when he saw Lilian for the first time after his approaching marriage with 'Miss Farrar' was announced.

The Fairview party were attending morning service at the little church to which Lilian and I went. I do not think that they had the slightest expectation of seeing us there; since they could not know that we should choose the long walk to that out-of-the-way little church, in preference to attending the one in the village. Most probably they went there for the drive, or perhaps to create a little sensation, which Miss Farrar was candid enough to acknowledge she had a *penchant* for doing.

They were shewn into the best pew, as befitted people who had arrived in state, the old clerk himself seeing that their wants in the way of hassocks and hymn-books were duly supplied, before signing to his subordinate to cease pulling the bell, and stepping back into the vestry for Mr Wyatt, whom he always carefully buttoned into his reading-desk before shutting himself up in his own square box beneath. How thankful I felt that although Arthur Trafford could see Lilian, she was so placed that she could not see him. I was glad too that he should see her thus—shewing no traces of suffering from his desertion, her face blooming with the delicate rose-tint of health, and its whole expression calm, and sweet, and pure; whilst she joined in the service in a way which betokened no wandering thoughts, unconscious of the eyes bent upon her half in shame, half in regret. He was surprised, I fancied even disagreeably so, to find his loss borne so calmly as this. And though he no doubt persuaded himself that he was glad to see that his desertion had not permanently injured her, his vanity was wounded.

It was just as well that the bride-elect had no misgivings about herself, and was too much occupied in admiring some bracelets, which I suppose she was wearing for the first time, to notice the direction of her lover's eyes. She did not perceive us where we sat, and I contrived to whisper a few words so as to draw Lilian's attention from them, as they passed down the aisle on their way out. They had driven away before she knew that they had been there, and I was rejoiced to find that her walk home was none the less enjoyed for my telling her of it.

The following evening Lilian was seated at the piano trying a new song which Robert Wentworth had brought down with him. He was standing by her side, listening attentively and critically, stopping her every now and then, to make her go over the ground again, frankly pointing out defects of style or what not, as his habit was with all we did. A glorious July evening.

The world's comforter, with weary gait,
His day's hot task has ended in the west.

I was sitting at the open window, my eyes turned towards the hill-side, bathed in the glory of departing day, my mind attuned to Lilian's music, and reflecting the *couleur de rose* of the scene outside. I was indulging myself with a peep into dream-land, though a little doubtfully, and somewhat as an interloper, liable at any time to be warned off the enchanted ground, which, in my self-conscious-

ness, I told myself youth alone has a right to enter, when my attention was attracted towards Becky, standing at the door and beckoning me out of the room.

'A letter for you, Miss; just come by the evening post,' she whispered, slipping it into my hand when I joined her outside. I noticed that Becky always called me aside to give me the foreign letters now; as though she intuitively felt that I should prefer to receive them when alone.

I thanked her with a look; and hastily catching up my garden-hat, slipped by the window and out at the gate, unobserved; then hurried down the lane to read my precious letter at the stile, in the red glory of the sunset.

A letter from Philip—and what a letter!—'My wife—my dear wife. At last I am setting my face homewards'—

Ah, well; I think I will tell the rest in my own words. I have been chary of quoting Philip's letters hitherto, and they shall be sacred still. Enough for me to say that his affairs were definitely settled at last. He loved me—he *did* love me—in a way which it made me humble to think of; humble, and proud, and glad, with all a woman's strength and depth. Ah! Philip, for once I was satisfied for your sake; it was something stronger, and deeper, and more enduring than a girl's love awaiting you!

How tenderly he wrote about the pain which the long waiting had cost him! How tenderly he dwelt upon what he termed my unselfishness in acceding to the delay! How rejoiced he seemed to be at last able to claim me—'me,' I repeated, nodding pleasantly at a wild rose peeping round the hedge. 'You wouldn't imagine it, I daresay, but it is true, nevertheless.'

Philip had never written like this before; never until now had it been so evident how much the long waiting had cost him. Whilst I had sometimes tormented myself with fears lest the separation should at length have become a matter of course to him, he had been silently rebelling. I could only judge how much by the sudden revulsion—the contrast in his tone now that the waiting was at an end.

He had made enough to satisfy us two, without any more 'money-grubbing,' as he termed it. He would have nearly two thousand a year when he had retired from the partnership and all was settled. We could now live the life we had dreamt of in the old times, with the gratification of knowing that we had earned it. Any time after the middle of next month he might be expected. 'And you must amuse yourself in the meantime in deciding where we are to pitch our tent. Look about for a house after your own heart for us to settle down in,' and so forth, and so forth. Was ever woman so blessed! My whole being steeped in happiness, I clasped my hands upon the top bar of the stile and tried to offer up a thanksgiving. What had I done to deserve all the happiness showered upon me? What was I that I should be so blessed? But mental prayer was not enough. There was the irresistible desire to *give* as well as receive, which is experienced in all seasons of great joy. Who can love one truly without being in more sympathy with all humanity! I only know that I felt I could not bear my happiness aught until I had, so to speak, consecrated it by some act of love.

I slipped my letter into the bosom of my dress, turned down the lane which ran at right angles with that leading from the cottage, and walked swiftly on. On I went, without thinking whither; yielding to the impulse upon me, without pausing to ask myself how far I should have to go, or what I should find to do in those silent lanes. Was some subtle influence at work with me, of which at the time I was not conscious? Was some guardian spirit leading me towards an end it was not necessary for me to see? I only know that I shall never believe it was only chance which led me to a certain spot that night!

S U B M A R I N E C A B L E S.

T H E I R M A N U F A C T U R E.

TWENTY-SEVEN years ago the first submarine cable was laid across the Strait of Dover. This was a single copper wire covered in gutta-percha, which passed next day; and the first practicable submarine cable was laid in 1851, on the same route. Since then the progress of ocean telegraphy has been extraordinary; no fewer than six cables spanning the Atlantic bed—five to North America (although these are not all working), and one to South America by way of Madeira and Pernambuco. And so extensive is the already existing network of foreign cables, that when Asia is united to America by cabling the Pacific, the electric girdle round the world will be complete from east to west, as it now is between north and south.

In this great development of telegraphy our countrymen have unquestionably furnished both the lion's share of the work and the capital. The cables have nearly all been manufactured in London, which is the headquarters of telegraphy.

The principal parts of a submarine cable are: the *conductor*; the *insulator*; and the *protector* or *sheathing*. The conductor, as its name implies, is the wire which conducts or conveys the electric current from one place to another. It corresponds to the iron wire of our ordinary open air or land lines of telegraph. Along this wire, as is well known, the current from the battery at the station from which the message is being sent travels to the station receiving the message, where it passes to the earth, and appears to return through the earth to the battery again; thus *completing its circuit*. There are two distinct parts of the circuit which the current has to traverse—namely, the outgoing part, represented by the wire or *conductor*; and the return part, represented by the earth itself; and inasmuch as these two parts must be kept distinct and apart throughout their length, the wire which is laid along the earth's surface must be kept apart from the earth, to secure which the conductor is entirely surrounded with an *insulator*. In land lines, erected on posts overhead, the wire is separated or insulated from the earth by the air, which is, when dry, the most perfect insulator known; and at the points of support, contact with the earth is prevented by the use of porcelain, stoneware, or vulcanite 'insulators,' to which the conducting wire is fastened.

An insulator is a non-conducting substance, impervious, so to speak, to electricity. It is the theoretical antipodes of a conductor. While the conductor is a substance through or over which electricity flows freely, the insulator will neither

permit electricity to pass through its mass nor over its surface. It can therefore be used as a means of confining electricity to a conductor, and preventing it from escaping to other conductors in the neighbourhood. In short it can be made to insulate or isolate the particular conductor from all other conductors. Its use in a submarine cable is to confine the electric current to the conductor or wire, so that it travels along it from one station to the other without escaping to the water, and through that to the earth (which, as we have already said, is the neighbouring conductor, and the return part of the circuit) on its way. It is therefore of course important that there shall be no flaw in the insulator, and in order to protect it from strain and violence, it is covered with a strong guard or sheathing. This outer sheathing or protector, which is composed of twisted metal strands, is purely mechanical. Only the conductor and the insulator are concerned in the *electrical* requirements of the cable.

The conductor is invariably of copper wire, that metal being chosen because, next to silver, which is of course too expensive, it is the best metallic conductor of electricity. The metals, as distinguished from most other minerals, are excellent conductors of electricity; that is to say, they oppose relatively *less resistance* to the passage of the electric current through their mass. There is an economy of power in using a good conductor for the telegraphic line. The current is less weakened when the resistance to its passage along the line of wire is less, and it is therefore capable of more powerful effects throughout the route, and consequently at the other end. The conductivity or conducting power of a wire increases with the thickness of the wire; and therefore by taking a thicker wire of a more common metal than copper (such as iron), the resistance to the passage of the current may be made as small as when a thin copper wire is employed. But it is important that the conductor of a submarine cable, especially of a long one, should be of as fine dimensions as possible, in order to economise insulating material and sheathing, and reduce the total weight of the finished line. Therefore the advantages in point of price of iron wire over copper in the first place, would be greatly overbalanced by the increased cost of insulating and sheathing it. It is of the greatest importance that the copper wire of the cable should be as pure as possible, for the slightest trace of arsenic or other foreign element is sufficient to hamper, in some mysterious way, the swift course of the subtle current, and very materially to weaken the conducting power of the wire.

In a few cables the copper conductor has been made in the form of a single thick wire; but for the sake of greater flexibility and less risk of breakage, it is generally made in the form of a strand of three or more, and frequently of seven wires; six set round a central one. The wires are wound together in a spiral strand, and their interstices filled with an adhesive substance called Chatterton's Compound, a mixture of resin, gutta-percha, and Stockholm tar. This compound not only renders the strand solid, and impervious to water, but also acts as an adhesive connection between the copper conductor itself and the insulator with which it is to be coated. Bound to-

gether with this or similar pitchy compounds, the conductor and the insulator form a solid *core* expanding and contracting together.

The insulator is always either of gutta-percha or india-rubber, but most frequently the former; and it is of course essential that there shall be no flaw or defect, such as an air-bubble or steam-vesicle, or hair or thread inclosed so as to deteriorate its insulating properties. To guard against such accidents, it is usual to apply a series of coatings to make up the total thickness of the insulator. Accordingly, when one coating has cooled, a layer of Chatterton's Compound is applied to it, and another coating overlaid, and so on, until the required amount of insulating material has been put on.

Whether the insulating substance is gutta-percha or india-rubber, there is generally wound round it a serving of untarred hemp or jute yarn, which has either been tanned or soaked in brine as a preservative. This is to act as a padding or cushion for the iron sheathing or protector next to be applied. This serving is applied in the following way. A circular disc or frame, carrying on one face a series of bobbins which hold the threads of the yarn, is kept revolving. The core is made to pass through a hole in the centre of this disc, and the threads are wound spirally round it as the disc revolves.

The iron wires of the sheathing, which completely inclose and cover the served core, are wound on by the powerful 'cable machines,' whose operation is so interesting a feature in a visit to a cable factory. The great revolving disc, seven or eight feet in diameter, is set round with iron bobbins filled with the iron sheathing wires. These bobbins are suspended on the face of the disc, so that as the disc revolves they always preserve their fixed position with respect to the earth. In this way the wires themselves are not twisted round their own axes as they are laid on the core. These wires are generally of the best homogeneous iron wire, that is, a wire intermediate in quality between iron and steel, and uniting some of the toughness of the former to the strength of the latter. They are sometimes themselves covered with a serving of the best tarred Manilla hemp; sometimes laid on in single wires abutting against each other, so as to form a smooth and complete casing for the cable; and sometimes they are applied in strands of three wires, each abutting against each other. The composite sheathing of hemp and iron is usually applied to the deep-sea portion of a cable where, in laying, a union of lightness and strength is demanded, and where, when once laid, the cable is not likely to be molested. The single-wire sheathing is applied to cables to be laid in shallower depths, such as coast-waters; and the heavy-strand sheathing is for protecting the cable in anchorages and on sea-beaches. The light-sheathed cable is called 'main' or 'deep-sea cable'; the medium is called 'intermediate'; and the heavy-sheathed cable is called 'shore-end.' There is seldom more of the last than ten or twelve miles, to carry the cable well out of reach of the abrasion of storm-shifted boulders and coast anchorage. The intermediate usually extends until deep water has been reached, where the deep-sea portion takes its place. These three types of cable are connected together by 'taper pieces.' The core is of course uniform throughout the entire length of the cable; but the

taper pieces serve to connect the different types of sheathing artistically and soundly with each other. The intermediate cable generally has its sheathing wires covered with a serving of mineral pitch, silica, and hemp of a coarse quality, in order to ward off as long as possible the dissolving action of the sea-water.

The cable being thus finished at the manufactory, it is coiled into large iron tanks, and there immersed in brine until it is shipped for transport and laying.

All the materials of a submarine cable are carefully watched and tested—the iron wire, for stretching, twisting, and breaking stress, and the core for all its electric properties. The special properties of every knot or mile of the core are chronicled, so that a complete account of every part of the cable is preserved during its progress of manufacture. And after it is made, it is tested electrically every day, to see that no change takes place in its electric qualities. These electric tests are three in number: For *resistance*—the resistance of the copper wire to the passage of the current. For *inductive capacity*—the amount of charge or quantity of electricity which the cable will take up. For *insulation resistance*—the insulating power of the gutta-percha coating.

These tests are made by direct comparison with units, just as bodies are weighed by comparison with a pound or unit of weight. The unit of electric resistance is the *ohm*; so called after the celebrated German physicist and electrician Ohm. The ohm is the resistance of a certain length of platinum-silver wire determined by a Committee of the British Association. Multiples of the ohm are readily obtained, and these are arranged and made up into what are called *resistance-boxes*—the practical tool of the electrician. A resistance-box usually contains coils of platinum-silver wire of from five thousand ohms downwards to single ohms or fractions of an ohm. It is with this finely graduated tool that the electrician compares the resistance, or in other words ascertains the conducting power of the cable.

The unit of measurement of the *insulation resistance* of the cable is a very high multiple of the ohm, called the *meg-ohm* or million-ohms; for inasmuch as the insulator is, technically speaking, a non-conductor, its office is to exercise the necessary resistance to the escape of the current. The unit for capacity is called a *micro-farad* or millionth part of the *Farad*, which derives its name from Faraday, and represents a certain quantity of electricity. The practical tool for the micro-farad is a contrivance called a *condenser*, a description of which, without the aid of drawings, would be too technical for our readers. A submarine cable is itself, however, a particular form of such a condenser. The copper wire is one of the opposed conductors, the sheathing, earth, and sea-water form the other, and these are separated from each other by the insulating coating of gutta-percha. It is a curious fact that when a charge of electricity is communicated to the copper wire of a cable, it induces a charge of an opposite kind in the earth outside. This inductive property of an insulated wire contiguous to the earth has an important bearing on practical telegraphy; for inasmuch as the communicated charge and the

induced charge attract each other, the former travels less swiftly along the wire; it is held back, as it were, by the retarding influence of the earth's induced charge; or in other words has a tendency to ooze out of the cable instead of travelling uninterruptedly to the other end. It is of consequence, therefore, to ascertain the inductive capacity of a cable; as the less it is, the greater will the speed of signalling be.

The resistances and capacity of a cable are usually tested, according to the standards of resistance and capacity—that is, with the ohm, meg-ohm, and micro-farad—by measuring the strength of an electric current passing through the cable, by means of an instrument called the galvanometer, or current measurer. Its principle depends upon the fact, discovered by Oersted, the famous Copenhagen philosopher, that when a current is sent along a wire in the neighbourhood of a freely suspended magnetic needle, the needle will be deflected into a new position, and this position will be to right or to left according as the current of one kind or the other is sent through the wire. Moreover, the amount of deflection will be directly proportional to the strength of the current. This great discovery, which gave an incalculably great impetus to the progress of the telegraph, is the theoretical basis of the galvanometer. One form of this instrument, used to test submarine cables, is called the 'reflecting galvanometer' and is the invention of Sir William Thomson. The wire through which the current to be measured is made to pass, consists of a great many turns of silk-covered or insulated copper of a very fine gauge, forming a hollow coil, in the heart of which a very diminutive magnetic needle is suspended by a gossamer-like filament of floss silk. This magnet (or magnets, for there are generally more than one) carries a tiny circular mirror, the whole arrangement of magnets and mirror being no longer than (—). A beam of light is thrown from a lamp in front on to the mirror, and reflected back again on to a graduated pasteboard scale. When the current to be measured is sent throughout the coiled wire surrounding the magnets, they are turned horizontally on their former position, and the mirror is inclined round with them, so that the reflected beam of light is moved along the scale, the distance to which it is moved being a measure of the current strength.

Now when the current from a given battery or source of electricity is made to pass through wires of different resistances, the strength of the current which will pass through these wires can be made a measure of their resistances; and therefore, when the current from a particular battery is sent through the conductor of the cable or to test the insulator, and in each case measured by the galvanometer, and compared with the current from the same source which will flow through the units of comparison, the copper resistance and insulation resistance can be obtained.

In a somewhat similar way the capacity—the amount of electricity which a cable will take—is compared with the capacity of a standard condenser or measure of capacity. The opposite plates or sheets of the condenser are charged by a particular battery; and as these charges are eager to flow into each other and unite, but are held apart by the insulator, they may be allowed to do so through a wire or other conductor. The discharge of the

opposite electricities into one another sets up a short powerful current in this wire, and its strength is proportional to the quantity of electricity discharged; that is, to the capacity of the condenser. If the coil of the galvanometer be substituted for this discharging wire, the strength of this discharge will be measured by the deflection of the gleam of light on the scale. By charging alternately, therefore, the condenser and the cable from the same battery, and observing their respective discharges by means of the galvanometer, the capacities of the cable and condenser are compared.

The speed of signalling through a submarine cable, that is to say the number of words per minute that can be transmitted through it, varies with the resistance of its conductor, its inductive capacity, and its length; and it is by a consideration of these properties, together with weight and cost of material, that its form and dimensions are designed; and on this interesting subject we may have a few words to say in a future paper.

LIFE IN ST KILDA.

FIRST PAPER.

FOR the following interesting account of the island of St Kilda, we are indebted to Mr J. Sands, a gentleman who has more than once visited the rock, and who upon one occasion was detained there for several months by stress of weather. As will be seen by his narrative—the first portion of which we now offer to our readers—he utilised his opportunities for observing not only the manners and customs of the natives, but many curious facts connected with the natural history and even the archaeology of the islet. With these few words of preface, we leave Mr Sands to tell his story.

Far out in the Atlantic—forty-nine miles west from Obe in the Sound of Harris, and forty-three from Shillay in the Outer Hebrides—there is a group of islands, evidently of volcanic origin, the largest of which, called *Hirta* by the inhabitants, and St Kilda by strangers, contains a small community who speak Gaelic only, and have all Highland names. This island, which is about three miles long by two broad, is bounded on the north-east and south-west by enormous precipices that rise like walls out of the sea. These cliffs are frequented by vast numbers of sea-fowl; by puffins, cormorants, guillemots, auks, and other birds. A species of gull called the fulmar also abounds, and is of great value to the inhabitants, who salt the flesh for food in winter and sell the oil and feathers. St Kilda is the only island in Great Britain where that bird breeds. About three miles to the north-east of St Kilda is an island called Boreray, which is the great resort of solan-geese, which also frequent the *stacks* or isolated rocks adjacent.

The population of St Kilda numbers at present seventy-five souls. It was considerably larger some two centuries ago. Where the community originally came from no one knows. Their early history is lost in darkness; but it can be traced back to the fourteenth century. In 1697 Martin visited the island, and wrote a quaint but faithful account of it. At present there is no regular communication between St Kilda and any other place except by a boat called 'the smack,' which is sent out by the proprietor (MacLeod of MacLeod) twice

a year—namely in summer and autumn, to collect the rents, to carry away the produce, and to furnish supplies. Some bold yachtsman generally pays the island a hurried visit about the end of summer; but as the anchorage is dangerous, he seldom or never remains more than two or three hours. Some of the natives have been as far as Lewis, Harris, and Uist, and surprise the others with tales of the wonders they have seen in those distant places; a man with a wooden leg having apparently created the greatest interest. But the majority have never been farther than Boreray. No people can be more isolated or less indebted to their neighbours for example or instruction in the ways of civilised life. Notwithstanding this, it will be difficult to find a better-behaved community—one more pious, sober, industrious, polite, and hospitable.

I had always a great desire to see this *Ultima Thule*, and in 1875 the proprietor's factor agreed to give me a passage in his smack to the island. On the 3d of June I landed, and at my own desire was left behind when the smack sailed from the bay on the 6th. I remained on St Kilda about seven weeks, and passed the time in rambling about the island, trying to learn Gaelic, making excursions to the other islands in the boats along with the natives, and in visiting them in their homes. I lived in a house by myself and cooked my own food. I had a set of bagpipes with me and a flute, and when threatened with melancholy cheered myself with a tune on these instruments. I bought some biscuits, oatmeal, &c., and a sheep or two, and the women kept me supplied gratis with turf for my fire. At the end of seven weeks the yacht *Crusader* came into the bay, the owner of which kindly gave me a passage to Greenock. Before I left St Kilda I had an opportunity of seeing how the trade was conducted—the low prices which the poor people received for their produce, and the high prices they were obliged to pay for their supplies, and I felt no little sympathy for them. Animated with a desire to better their condition and assimilate themselves with their more fortunate brethren of the mainland, they requested me several times to try to get them a boat large enough to carry a crew and cargo to Harris, where they might carry on their trade on more profitable terms than with the proprietor. On my return home I got a boat built for them, and started a subscription to pay for her. I further resolved to go out in her myself, so as to see her safely delivered to the people, and to give them a little enlightenment as to the prices of commodities in the outer world.

On the 30th May 1876 I arrived at Lochgilphead to get possession of the boat, which seemed suitable for the purpose; and by the kind assistance of Messrs Hutcheson, the well-known ship-owners, I reached Stornoway, *en route* for St Kilda, in safety.

I remained in Stornoway weather-bound until the 12th June, and whilst waiting for a fair wind to continue our voyage westward, let me narrate a mysterious occurrence, bearing on my narrative, that took place some years ago.

In the month of April 1864 a boat left St Kilda for Stornoway with a woman and seven men on board. Every man had a chest, and the woman a small box; and they took provisions with them, and some salt-fish and home-spun cloth to pay expenses. The islanders went up the hill

called Oswald or *Osimhal* and watched the boat for several hours. All seemed well. The woman in the boat intended to visit some relations at Loch Inver.

On a Sunday about a month afterwards, three London smacks entered the bay and brought the news that the boat was lost near Lewis with all on board. Never doubting the truth of the intelligence, the inhabitants gave vent to their grief without restraint. The three skippers came on shore and beguiled the time by playing quoits with flat stones, and when they witnessed the agitation of the bereaved St Kildans, they jeered in mockery. There was no minister on the island at the time, but a probationer called Kennedy filled the office. Although he understood English as well as Gaelic, he never thought of taking a note of the names of the smacks. The St Kildans say the crews belonged to London, but that one man could speak Gaelic. Some time afterwards some of the clothes of the missing men, torn as if in a scuffle, were brought to St Kilda by the then factor, and were said to have been found in a cave at Lewis. The people got gradually resigned to their fate, although I heard them on my first visit declare that they believed the lost crew had been murdered. But I thought at the time that this was a preposterous suspicion, which could only be entertained by people living in solitude and ignorant of the world outside. But strange to relate I was told by Mr MacIver, banker in Stornoway, that a letter had been received from a firm in the Transvaal Republic, by the minister of Harris, stating that Donald MacKinnon, one of the lost crew, had just died at Pilgrim's Rest, Lydenburg Gold-fields, of fever, and had left property to the amount of thirty-seven pounds. On my expressing a suspicion that the strange story might be untrue, Mr MacIver informed me that the money had actually been lodged with him.

Why Donald MacKinnon had never written to St Kilda to inform his father and other relatives of his fate, is a mystery that none can fathom. But if he was preserved, it is possible that some others of the missing crew may have been saved too. I may mention that Sir John MacLeod, then proprietor of St Kilda, caused an inquiry to be made at Lewis at the time the boat was lost; but without eliciting any information.

At Stornoway, I was introduced to Captain Macdonald of the fishery cruiser *Vigilant*, and hospitably entertained in that smart vessel. He seemed desirous to give me a convoy to St Kilda; but the Board, to whom I applied, declined to allow him to leave his station. On the 12th June, however, he took me on board and my boat in tow, and conveyed us to the island of Scalpa, where I abode for several days in the house of Mr Campbell, the chief man of the island, who treated me with true Highland hospitality. Mr Campbell's house stands on the site of one recently demolished, in which Prince Charlie found shelter when hiding from his enemies. A stone above the door bearing an inscription in Gaelic, records the fact. In one of the cottages in Scalpa I saw about a dozen girls thickening blankets; this they did by tossing them about upon a broad board. One of the girls sung a Gaelic song, whilst the others joined in the chorus. On my entering the room the songstress cleverly composed a verse about me. I was much interested with this ancient Highland custom.

The land in Scalpa is poor and boggy; but some of the people are fine specimens of humanity—good-looking and polite. Some of them expressed an opinion that the island was over-populated, which I am afraid is the case, although I should be sorry to see such men leave the country. On the 17th, the *Vigilant*, which had returned to Stornoway, again called at Scalpa, and took me and my boat on to Obe in the Sound of Harris. The navigation of these straits is considered very difficult; but Captain Macdonald, as if to display his seamanship, ran down the Sound and then tacked up again without fear, and in a manner that excited my admiration. I had never seen a smarter vessel or seaman.

At Obe I found the factor's smack lying weather-bound. Here also I saw two St Kildan women who had come to Harris nine months previously, and were yearning to be home again, never having heard from their husbands since they left. On the 18th the *Vigilant* returned to Stornoway.

At Obe I engaged two men to work the boat to St Kilda, agreeing to pay them eight pounds for the trip, but stipulating that when the boat reached the bay they were to have no further claim upon me. This seems a large sum; but for all I knew they might have had to live for weeks in the island without a chance of returning. However, they arranged with the smack's skipper (an old friend) for a return passage; and on the 21st, at seven in the morning, we set sail—two men and myself in the new boat, a rope connecting us with the smack. When about half-way St Kilda was descried on the western horizon—suspected more than seen, for though the day was bright and sunny a thick haze obscured the distance. We reached the island about five in the evening, and separating from the smack, cast our anchor near the shore. Soon a crowd began to gather on the rocks, but they did not seem in a hurry to launch their boat. I observed one of the women who had come with the smack standing on deck and holding up her infant (born during her absence from St Kilda) in a triumphant manner, although she was too distant to be seen from the shore. At length a boat is pushed off and pulls towards us; the crew stare doubtfully at me, and then, as they come alongside, repeat my name and grasp my hand. I and the two men who had come with me jump into the shore-boat, and are landed on the rocky bank amidst a crowd of men and women. But whilst I am busy shaking hands with this old friend and that, one of the Harris men suddenly discloses the story about the lost boat and Donald MacKinnon, and in a moment all is confusion, grief, and amazement. Women squat upon the ground and chant their lamentations; and men stand with open mouths and eyes and mutter observations in Gaelic on the wonderful news.

The boat goes off to the smack and brings the two women on shore, where they are received with conjugal kisses. Ten months had elapsed from the receipt in Harris of the letter from Africa until its arrival in St Kilda—although the one place is visible from the other in a clear day.

I must now try to describe the village. It is built on a comparatively level piece of ground about twenty feet above the sea, at the foot of steep hills, has a southerly exposure, and consists of nineteen cottages, arranged like a crescent. They are plainly built and roofed with zinc. They were

erected about fourteen years ago. But the old huts in which the people formerly dwelt still stand, and are picturesque structures. The walls of these are double, with turf packed in between. They are built without lime, and are thatched with straw, held down by ropes of the same material attached to stones. They are said to have been very warm and comfortable. In some of them are beds in the wall, accessible by a hole like the mouth of a baker's oven. These huts are now used as cow-houses, barns, and cellars, and are similar to the houses in Lewis, Harris, and other islands of the Hebrides. I include the manse or parsonage in the above number, although it is rather better built. At the back of it stands the church, a modern and ugly building. The plan of the village was until lately like the framework of a boy's kite; but the staff is now gone, and the bow alone remains. In front of the village and between it and the sea, is a patch of arable ground of about fifteen or twenty acres in extent, divided into lots. There are also patches of arable ground behind the village. The whole is inclosed by a massive dry stone wall, to keep off cattle. But what chiefly excites the attention and wonder of the stranger is the immense number of small houses everywhere to be seen around the village and clustered all over the island, up even to the summit of the hills. These are called *clætan*, and are used as storehouses for turf and grass. They are called pyramids by Martin. In general they are built so narrow that single stones can be laid from one wall to the other to form the roof. Some of these primitive structures are said to be ancient; but I have seen others erected on exactly the same system, for architecture has not changed in St Kilda, as in other places. Behind the village the steep hills rise to a considerable height, Connagher being one thousand three hundred feet above the sea. The bay or loch is open on the south-east. It is sheltered on the south-west by a long craggy island called the Dun.

On the 24th, the factor's smack left for Dunvegan. Before going on board he presented a document to the men, who were all assembled on the shore, and requested them to sign it. He made no objection to their trying to go to Harris in the new boat; but he wanted to know if they wished the proprietor to send supplies as usual. The men seemed resolved to make use of the new boat; but were persuaded by the minister to sign the paper. I was not pleased at this transaction, for although the boat was found very useful in making trips to the other islands for birds, she was procured for the express purpose of enabling the people to trade with Harris. When they had signed the paper, which bound them still to continue their transactions with the factor, my object was in a measure frustrated, and the islanders had no alternative but that of still relying upon the smack for their autumn supply of oatmeal and other articles from the mainland.

For a few days I took lodgings in one of the cottages; but afterwards I got a house to myself, and cooked my own food.

On the 29th of June I went with a party of eighteen men and boys in the new boat to the island of Boreray. All the men but two, who were left to take charge of the boat, ascended the cliffs, and I was tempted to go along with them.

With the end of a rope round my waist, held by a man who preceded me, I clambered up such paths as one may see in a nightmare. I thought it best not to look too far ahead, but to keep my attention fixed on the ground at my feet. Sometimes I was indebted to my guide for a pull up some difficult bit; and I succeeded in reaching the top. The height was probably eight hundred feet—the highest rocks on this island being over a thousand. Some of the cliffs were white with solan-goose. All the men dispersed and descended the cliffs to catch fulmars, and I was left in charge of a youth called *Callum Beag*, or Little Malcolm, who will retain the same name although he grows to six feet.

It is the custom of the St Kildans to send a party of young women to this island every year to catch puffins for the sake of the feathers. During my first visit I had gone with such a party to Boreray, and saw them at work. Rearing their young in holes in the turf, these curious birds (called *Tammie Nories* in some places) require dodging to get at, and great care in handling, as their bite is very severe. Being acquainted with their habits, the women take dogs with them, which are taught to alarm the puffins and to catch them as they flutter out of their holes. The girls also place hair-ropes on the ground, held down at the ends by stones. Nooses of horse-hair are affixed to the rope, into which the birds (which frequent this island in incredible numbers) push their feet. In this way some of the girls catch as many as four or five hundred puffins in a day. The young women remain about three weeks on the island, all alone by themselves. They work until they drop asleep. Every one takes her Gaelic Bible with her, for all can read with ease. They sleep in the clothes they wear during the day. On my second visit to this island, I took a glance at the houses in which these bird-catchers reside. They are three in number, and are covered outside with earth and turf, and look like grassy hillocks. One of them is fifteen feet long by six feet wide. It is six and a half feet high at the hearth, which is close to the door. A semicircular stone seat runs round the hearth. The rest of the floor is raised a foot higher, and is used as a bed. The door is about two and a half feet high, and has to be entered on hands and knees. These houses are built on the same plan as the *clætan*, but are covered outside with earth and turf for the sake of warmth.

A house of the bee-hive type, described by Martin and Macaulay, formerly stood on this island; but to my great regret it has been demolished within the memory of man. It was inhabited by a hermit called Stallir. The people have several traditional tales about this house. When I had seen all that was to be seen, I grew tired sitting on the top of the cliff, and ventured to descend without assistance. Callum Beag tried to remonstrate, but I persisted, and fortunately succeeded in reaching the boat below. I had begun to be familiar with great heights, for it is all a matter of custom. In a short time all the men were seen descending the cliff laden with fulmars; and hoisting our lug-sail and jib we returned to St Kilda.

One day shortly after my arrival an old man happening to be up the hill at the back of the village despaired what he imagined to be two marks cut on the turf on the top of Boreray. A

party of men, it is necessary to explain, had gone to that island about a fortnight before to *pluck* the sheep which are kept there, for shears are as yet unknown in St Kilda. He came down in great distress, and communicated the intelligence to the rest of the people, who, to my surprise, were thrown into a state of consternation. The women seated themselves on the ground and chanted lamentations. On inquiring the reason, I was informed that a system of telegraphy had been long established in St Kilda, and that two marks cut in the turf in Boreray signified that one or more of the party were sick or dead, and that a boat was wanted immediately. I went up the hill, and with a glass discovered that one of the marks was a number of men building a *clat*. I explained this to some of the people who had followed me, but failed to convince them for a time. In the evening, however, when the boat returned from Boreray with the plucking-party all well, the sceptics acknowledged with joyful smiles that my glass was better than their eyes.

THE LUDICROUS.

It would appear that the human memory is more retentive of the grotesque and ludicrous, whether moral or physical, than of the sublime and beautiful in nature, the graver incidents of life or the loftier mental experiences. We recall with realistic distinctness every object whose saliency has consisted in pleasing distortion, and every event that has in any way appealed to our sense of humour; while we may reproduce but faintly the impressions received from the contemplation of the highest works of art, the most perfect landscape, or the ordinary vicissitudes of the world. In every-day language, this is largely accounted for by the force with which the exception to any given rule, the aberration from ordinary courses of action, and the departure from universally accepted principles, arrest our attention in virtue of their rarity. This of course applies to many other classes of phenomena besides the odd, the distorted, the whimsical, or the ridiculous; but the human mind, strange though it seems, has undoubtedly a greater facility for the reception and reproduction of these than of any other.

If we deliberately cast back in our minds for the images of our early playmates and school-fellows, we observe that the first to present themselves, as a rule, are those possessing some marked peculiarities, and that those peculiarities are the centre-points of the pictures. Ordinary faces and physiques, even of those near and dear to us, shew but dimly on memory's canvas; but a squint, a lisp, a burr, freckles, ungainliness, or oddity of manner, has stamped there the images of comparative strangers with indelible clearness; and the blemishes which produce these results are themselves not only plainly delineated, but frequently exaggerated. Again, if we permit the mind to revert unrestrainedly to the *events* of childhood, the earliest to suggest themselves are, almost invariably, those which have exercised our risible faculties or sense of the absurd—the laughable scrapes, odd predicaments, amusing exploits of ourselves or others, are the things remembered of our youth. The recollections of any two men of middle age with regard to their common school-days seem with whimsical anecdotes, to the almost total

extinguishing of other things. This experience may be termed universal, and suggests the curious question: To what extent should we be at all able, if devoid of the sense of humour, to recall the companions and incidents of our childhood and youth?

Let us look at our subject from another point of view. What do we find on attempting to recall our knowledge of 'the men of all times,' whose biographies we have read? We cast our net, as it were, into the pool of our recollections—say, for example, regarding a Napoleon, a Newton, or a Columbus. The result is significant. Beyond an imperfect conception of the scope and lesson of their lives, nine out of ten fairly intelligent people will succeed in landing only a few trifles in the shape of anecdotes, physical peculiarities, or amusing idiosyncrasies. The first was the ambitious disturber of Europe; the second, a philosopher; the last, discovered America. In addition—what? Why, Napoleon was fond of snuff, which he carried loose in his waistcoat pocket, and was called 'the Little Corporal.' The expounder of the law of gravitation on one occasion used his sweetheart's finger as a tobacco-stopper. And the private life of Columbus is epitomised in the apocryphal story of making an egg stand on end. Popularly, the portraits of heroes and notabilities are distinct in proportion to the number and saliency of their blemishes. (Who can forget the wen on Cromwell's nose?) On the other hand, their hopes, their loves, their sorrows, their great life-purposes, their very identities, are held together in the minds of the masses by the force of association with trivial and adventitious circumstances. It is an odd but not necessarily a humiliating reflection; for the mind that can find 'good in all things' will see in it a most wise and important provision in our mental economy.

The simplest and best known rule in the so-called art of Mnemonics is, naturally enough, based upon a recognition of the facility with which anything connected with the grotesque, absurd, or whimsical may be recalled. Dates, statistics, names, &c. are taken into the memory along with some catch-word or ludicrous expression, and are by that means reproducible almost at will. We are not prepared to say in how far such a rule is in the long-run beneficial or injurious to the natural memory, nor to decide to what extent thus deliberately burdening the mind with a host of distorted conceptions goes to counterbalance the immediate advantages sought. It is sufficient for our present purpose that its application is illustrative of what we have said.

The deliberate action of the mind, dictated by this rule, in seeking the aid of whimsicalities as the milestones and finger-posts of memory, is not only sanctioned (as we have said) by the recognition of one of its inherent properties, but by the most unmistakable precedents in its own natural operation. Surnames which do not owe their origin to the professions of those who first assumed them, or to modifications of Christian names, partake largely of the humorous in their conception, as we have shewn in former articles on Names in this *Journal*. They are, in fact, epigrammatic. Doubtless, among races in which the susceptibility to humour is very subordinate to other sensibilities, these epigrammatic names will embody less of that element; but even amongst the

gravest tribes of North American Indians, and the melancholy races of Eastern Asia, secondary titles are in common use for ordinary and familiar occasions, answering exactly to our own idea of nicknames. Amongst ourselves the coinage of surnames has long ago been completed and in full circulation, their original meanings having now no force or application to the persons bearing them. Even nicknames have almost disappeared from polite literature and society with the increasing sensitiveness of the age. The art of 'smashing' in the matter of names, however, still lingers in the nursery and the playground, as well as in the inner circles of family life generally; and if we cast an observing glance down the social scale, we shall find the practice more and more widely obtaining, until, amongst the rural population and the operatives of Lancashire and the Black Country, we find it absolutely universal. In the latter locality, indeed, the inapplicability of authorised surnames has led to their total disuse. We read some years ago a Report from an official source, in which it was circumstantially stated that many of the puddlers, nailers, and others had utterly forgotten their original or baptismal name, being invariably addressed and known by a *sobriquet*, which hit off some whimsical peculiarity of person or character. We ourselves have a lively recollection of a woman in the neighbourhood of Bilston to whom her own husband's real name was so unfamiliar that she entirely failed to recognise it when we questioned her regarding him.

Scottish literature, and that of England which in point of national progress corresponds to it, owe much of their vigour and enjoyableness to the quaintness of the counterfeit nomenclature with which they abound; and at the same time indicate the prevalence of epigrammatic humorous names in the age which produced them. One of our finest ballads indeed—*The Blithesome Bridal*—is little other than a catalogue of trenchant nicknames: 'Will wi' the meikle mou,' 'Bow-legged Robbie,' 'Thumbless Katie,' 'Plouckie-faced Wat i' the mill,' and so on.

If then the human mind has not only an exceptional facility for the reproduction of whimsicalities, but a significant tendency to seek for and employ these as aids to the memory of more serious but less salient things, how shall we estimate the mnemonic value of the sense of the *ludicrous*? We have no desire, even if space would permit, to treat the inquiry exhaustively; but may point out one or two of the leading facts on which so curious an investigation might be based, and one or two reflections which the subject immediately suggests.

First, then, it is a well-established truth that the barbarous races which have proved totally unsusceptible of civilisation are those which are utterly or almost utterly devoid of the sense of humour: exemplified in the aborigines of Australia and the Indians of the West; while on the other hand the Negro, endowed with the most whimsical of fancies, has, though steeped in barbarism, the latent germ of intellectual and moral progress. Secondly, among the so-called civilised branches of the human family, the Caucasian, with its rich vein of humour, its hearty power of laughter, and its deftness in extracting from every condition of things the elixir of fun, stands in unapproachable superiority. Lastly, to those whose observation of

national character has been sufficiently minute and varied, it will be equally clear that those European peoples which have the finest and deepest appreciation of the quaint and ludicrous (entirely distinct from wit), have also the greatest staying power intellectually and morally, and the largest possibility of development.

It would seem a fair inference from these facts alone, had we not already indicated it, that it is man's moral nature which benefits most largely by the presence in the mental economy of a sense of the ludicrous. The saying, 'Beware of him who cannot laugh,' is a pithy but conclusive commentary. All that is fairest in human life; all that is best and brightest in our earthly lot; the tender memories of childhood; the generous ties of friendship; the various sympathies which constitute the history of our inner selves, are rendered vivid and operative for our highest culture by the action of the simple yet unique mnemonic law which we have thus imperfectly examined.

S I S T E R S.

THE day had gone as fades a dream ;
The night had come and rain fell fast ;
While o'er the black and sluggish stream
Cold blew the wailing blast.

In pensive mood I idly raised
The curtain from the rain-splashed glass,
And as into the street I gazed,
I saw two women pass.

One shivering with the bitter cold,
Her garments heavy with the rain,
Limped by with features wan and old,
Deep furrowed by sharp pain.

A child in form, a child in years ;
But from her piteous pallid face,
The weariness of life with tears
Had washed all childlike grace.

And as she passed me faint and weak,
I heard her slowly say, as though
With throbbing heart about to break :
"Move on ! " Where shall I go ?

The other, who on furs reclined,
In brougham was driven to the play ;
No thought within her vacant mind
Of those in rage that day :

With unmoved heart and idle stare,
Passed by the beggar in the street,
Who lifted up her hands in prayer
Some charity to meet.

Both vanished in the murky night :
The outcast on a step to die ;
The lady to a scene of light,
Where Joy alone did sigh.

But angels saw amid her hair
What was by human eyes unseen ;
The grass that grows on graves was there,
With leaves of ghastly green.

And though her diamonds flashed the light
Upon the flatterers gathered near,
The outcast's brow had gem more bright—
An angel's pitying tear.

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